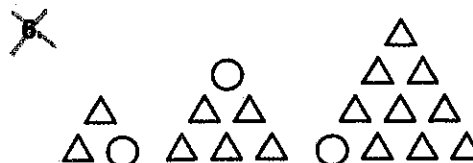
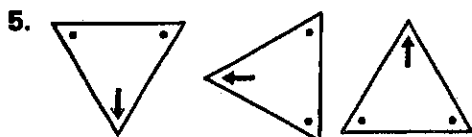
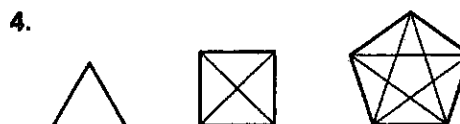
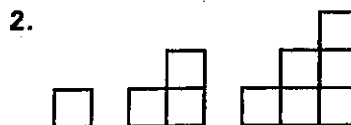
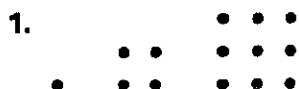


Practice B

For use with pages 3-7

Sketch the next ~~two~~ figures you expect in the pattern.



Describe a pattern in the numbers. Write the next number you expect in the pattern.

7. 4, 5, 7, 10, ...

8. ~~500, 100, 20, 4, ...~~

9. 6, -2, -10, -18, ...

10. ~~4.5, 9, 18, 36, ...~~

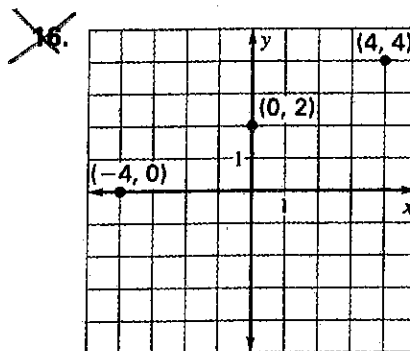
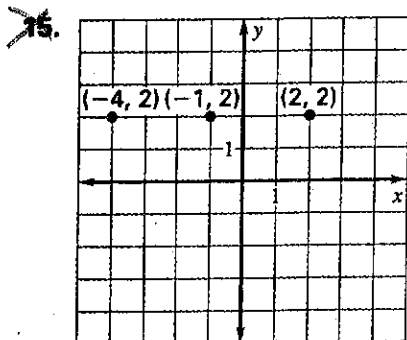
11. 7, 9, 12, 16, 21, ...

12. ~~1, 4, 9, 16, ...~~

13. ~~3, 5, 9, 15, 23, ...~~

14. ~~18, 17, 15, 12, ...~~

Find a pattern in the coordinates of the points. Then write the coordinates of another point in the pattern.



The number of bacteria after n hours is given in the table. Predict the number of bacteria after 6 hours.

17.

n (hours)	1	2	3	4	5
number of bacteria	3	6	12	24	48

18.

n (hours)	1	2	3	4	5
number of bacteria	640	320	160	80	40

Practice B

For use with pages 8–13

Complete the conjecture based on the pattern in the examples. (even or odd)

- 1.
- Conjecture:**
- The product of two odd numbers is ____?

EXAMPLES

$3 \cdot 5 = 15$

$5 \cdot 7 = 35$

$9 \cdot 7 = 63$

$11 \cdot 9 = 99$

- 2.
- Conjecture:**
- The difference of any two even numbers is ____?

EXAMPLES

$26 - 4 = 22$

$16 - 12 = 4$

$6 - 10 = -4$

$14 - 8 = 6$

- 3.
- Conjecture:**
- The sum of three even numbers is ____?

EXAMPLES

$24 + 2 + 4 = 30$

$-4 + 12 + 10 = 18$

$8 + 10 + 6 = 24$

$14 + 0 + 16 = 30$

- 4.
- Conjecture:**
- The sum of an odd number of odd terms is ____?

EXAMPLES

$9 + 13 + 1 = 23$

$3 + 5 + 9 + 7 + 1 = 25$

$1 + 1 + 3 = 5$

$3 + 7 + 9 + 5 + 11 + 13 + 5 = 53$

In Exercises 5–8, show the conjecture is false by finding a counterexample.

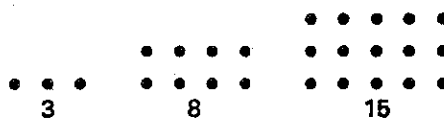
5. If the quotient of two numbers is positive, then both numbers must be positive.

6. If a four-sided shape has two sides the same length, then it must be a rectangle.

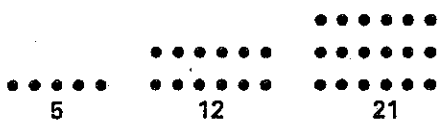
7. If a four-sided shape has opposite sides that are the same length, then it must be a square.

8. If the quotient of two numbers is an integer, then both numbers must be integers.

9. The dot patterns at the right form rectangles with a length that is two more than the width. Draw the next figure to find the next "rectangular" number.



10. Use the pattern of rectangular dot patterns at the right to find the next two "rectangular" numbers.

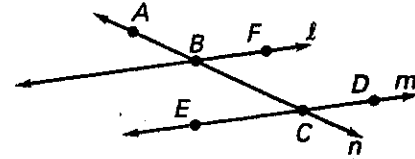


Practice B

For use with pages 14–20

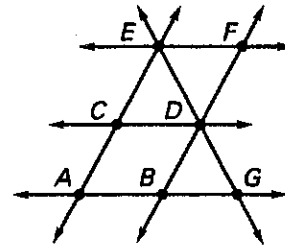
Use the diagram at the right to determine whether the statement is *true* or *false*.

1. Point A lies on line m .
2. Point F lies on line l .
3. B , C , and D are collinear.
4. E , C , and D are collinear.
5. A , B , and F are coplanar.
6. A , B , C , and D are collinear.
7. \overrightarrow{CD} and \overrightarrow{CE} are coplanar.
8. \overrightarrow{BF} and \overrightarrow{BC} are coplanar.



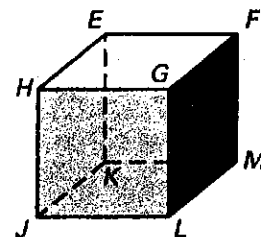
Name a point that is collinear with the given points.

- | | |
|-----------------|-----------------|
| 9. E and D | 10. C and A |
| 11. D and B | 12. B and G |
| 13. A and E | 14. D and F |



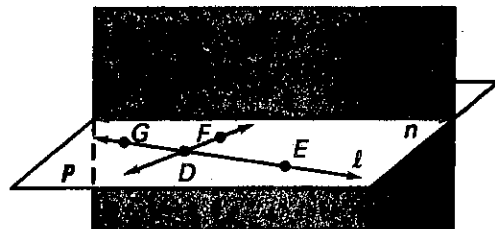
Name a point that is coplanar with the given points.

- | | |
|-------------------------|-------------------------|
| 15. J , K , and L | 16. J , K , and E |
| 17. F , G , and H | 18. F , G , and L |
| 19. E , K , and M | 20. J , L , and G |



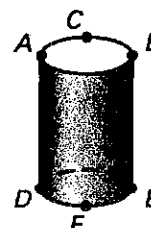
Use the diagram at the right.

21. Name three points that are collinear.
22. Name four points that are coplanar.
23. Name two lines that are coplanar.
24. Name three points that are not collinear.
25. Name four points that are not coplanar.
26. Name two lines that are not coplanar.



Use the drawing of an oil barrel shown at the right.

27. How many planes are represented by surfaces of the barrel? Use the labeled points to name the planes.
28. Do points A , B , D , and E appear to be coplanar? Explain.
29. Do points B , C , E , and F appear to be coplanar? Explain.



Practice B

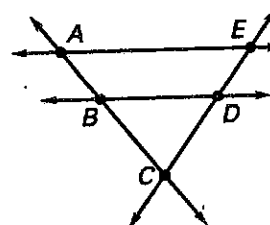
For use with pages 21–27

Decide whether the statement is true or false.

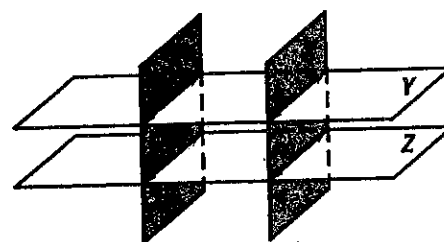
1. If two lines intersect, then their intersection is a plane.
2. If two planes intersect, then their intersection is a point.
3. If two lines intersect, then their intersection is a point.
4. If two planes intersect, then their intersection is a line.

Use the diagram at the right.

5. Name the intersection of \overleftrightarrow{AC} and \overleftrightarrow{CE} .
6. Name the intersection of \overleftrightarrow{AB} and \overleftrightarrow{ED} .
7. Name the intersection of \overleftrightarrow{AE} and \overleftrightarrow{EC} .
8. Name the intersection of \overleftrightarrow{AE} and \overleftrightarrow{BC} .

**Determine the intersection of the given planes, or write *no intersection*. Use the diagram at the right.**

- | | |
|-------------|-------------|
| 9. W and Y | 10. X and Y |
| 11. Z and X | 12. W and Z |
| 13. W and X | 14. Y and Z |

**In Exercises 15–18, sketch the figure described.**

15. Three lines that lie in a plane and intersect in a point
16. Three planes that do not intersect
17. Two lines in a plane that do not intersect
18. A line that intersects a plane at a point
19. The door shown in the drawing at the right is hung on a frame built into the wall of a house. It swings on hinges, and is held in the closed position by a latch. What is at the intersection of the planes represented by the door and the wall? Is this always true for the normal use of this door? Explain.

